

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

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U.S. DISTRICT COURT  
DISTRICT OF MASS.

SKYLINE SOFTWARE SYSTEMS, INC.,  
Plaintiff,

v.

KEYHOLE, INC. and  
GOOGLE, INC.,  
Defendants.

CIVIL ACTION NO. 04-11129DPW

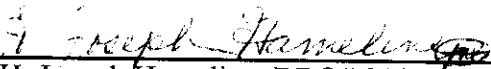
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Exhibit G  
to Declaration of H. Joseph Hameline, Esq. in support of  
Plaintiff Skyline Software System, Inc.'s Opening Claim Construction Brief

The original document is maintained in the case file in the Clerk's Office.

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Dated: March 4, 2005

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In Support Of  
Plaintiff Skyline Software System, Inc.'s Opening Claim Construction Brief

**EXHIBIT G**

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### ARTICLES

#### **The Interpretation of Patent Claims**

*Markman Subcommittee of the Patent  
Litigation Committee of the American  
Intellectual Property Law Association*

1

#### **Condemning a Patent: Taking Intellectual Property by Eminent Domain**

*Matthew S. Bethards*

81

#### **The Niche Market Manual: A Guide to Understanding the Niche Market Theory**

*Lori Kenemuth*

121

AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION

## THE INTERPRETATION OF PATENT CLAIMS

*This article is a report of the Patent Litigation Committee of the American Intellectual Property Law Association and was prepared by its Markman Subcommittee.\**

I.	INTRODUCTION .....	4
II.	THE MARKMAN DECISION: CLAIM CONSTRUCTION IS A QUESTION OF LAW FOR THE COURT .....	7
A.	<i>The Facts of Markman</i> .....	7
B.	<i>The Notice Function of Claims</i> .....	9
C.	<i>Extrinsic Evidence</i> .....	10
III.	THE PARTS OF A PATENT .....	12
A.	<i>The Specification</i> .....	12
B.	<i>The Claims: The Metes and Bounds of the Patent</i> .....	13
1.	Claim Preambles and Their Effect on Claim Scope .....	14
2.	Transitional Phrases in Claims .....	18
a.	"Comprising" and "Including" .....	18
b.	"Consisting of" .....	19
c.	"Consisting Essentially of" .....	19
3.	The Body of a Claim .....	20

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2	AIPLA Q.J.	Vol. 32:1	2004	THE INTERPRETATION OF PATENT CLAIMS	3
	a.	Elements as Understood by Those Skilled in the Art		Means-Plus-Function Interpretation of "Means-Plus-Function" Claims	49
	b.	Means-Plus-Function Claim Elements		Comparison of Equivalence Under the Doctrine of Equivalents and § 112, ¶ 6	51
	c.	Independent and Dependent Claims			
	d.	Functional Language: "Whereby" and "Wherein"			
	4.	Jepson Claims			
IV.	EVIDENCE THE COURT MAY CONSIDER IN CONSTRUING CLAIMS		V.	TIMING AND PROCEDURE FOR CONSTRUING THE CLAIMS	53
	A.	Intrinsic Evidence		A. Timing of the Markman Proceeding	55
	1.	The Claims: Ordinary Meaning is Presumed		B. Form of the Markman Proceeding	56
	2.	Comparing Claims in the Same Patent		1. Claim Construction on a Paper Record	60
	3.	The Specification: Highly Relevant to Claim Construction		2. Markman Proceedings vs. Hearings	61
	a.	Patentee Acting as a Lexicographer		C. Combining Markman Proceeding with Summary Judgment	65
	b.	Ordinary Meaning Deprives the Claim of Clarity		D. One District Adopts Mandatory Procedures: Local Rules of the Northern District of California	65
	c.	Clear Disavowal of Subject Matter		VI. EFFECT OF CLAIM CONSTRUCTION FROM PRIOR PROCEEDINGS	68
	d.	Other Limitations Found in the Specification Should Not Be Read into the Claims		A. Claim Construction Rendered in Connection with Motion for Preliminary Injunction	68
	e.	Claims Should Be Construed so as to Read upon the Preferred Embodiments		B. Collateral Effect of Claim Construction	69
	4.	The Prosecution History: Treated Like the Specification		C. Stare Decisis	70
B.	Extrinsic Evidence: Not All Are Treated Alike		VII.	APPELLATE REVIEW OF CLAIM CONSTRUCTION	73
C.	Reliable Evidence: Prior Art and Dictionaries		VIII.	CONCLUSION	75
	1.	Dictionaries/Treatises		APPENDIX	76
	2.	Prior Art			
D.	Other Factors				
	1.	Construe Patents so as to Sustain Their Validity			
	2.	Claims Should Be Construed Narrowly			
	3.	Parties' Positions			
E.	Means-Plus-Function Claims				
	1.	Generally			
	2.	Language Required to Invoke			

## I. INTRODUCTION

The purpose of this article is to assist those called upon to construe the claims of a patent, that is, to determine the meaning of patent claims. The procedure and manner for construing claims can vary depending on the court, the facts and issues in the case, and personal preferences. The Court of Appeals for the Federal Circuit has provided some guidance, however, as to permissible and impermissible claim construction procedures. This guide examines those procedures and underlying issues.

A patent is a grant issued by the United States Patent and Trademark Office ("PTO") that rewards an inventor for disclosing the workings of an invention to the public. It has been likened to a deed granted for real property. In exchange for disclosing an invention in a patent with sufficient detail so that the public can practice the invention, the patent owner gains the right to exclude others from the unauthorized use of its property (called an infringement).<sup>1</sup> The scope of the actual grant is defined by one or more numbered sentences at the end of the patent's text, which are called claims.<sup>2</sup> To continue the real property analogy, the claims of a patent comprise the *metes and bounds* of the invention, providing public notice as to the extent of the patentee's right to exclude others.<sup>3</sup>

<sup>1</sup> 35 U.S.C. § 271 (2000). This right includes the ability to exclude others from making, using, offering to sell, or selling a patented invention in the United States, importing a patented product or a product made by a patented process, or exporting the components for assembly. *Id.*

<sup>2</sup> 35 U.S.C. § 112, ¶ 2 (2000).

<sup>3</sup> *In re Vamco Mach. & Tool, Inc.*, 752 F.2d 1564, 1577, 224 U.S.P.Q. (BNA) 617, 625 n.5 (Fed. Cir. 1985); *A-B Dick Co. v. Burroughs Corp.*, 713 F.2d 700, 702, 218 U.S.P.Q. (BNA) 965, 967 (Fed. Cir. 1983); *accord* S3 Inc. v. NVIDIA Corp., 259 F.3d 1364, 1369, 59 U.S.P.Q.2d (BNA) 1745, 1748 (Fed. Cir. 2001) ("The purpose of claims is not to explain the technology or how it works, but to state the legal boundaries of the patent grant.").

Patent claims are subject to many technical rules, as well as historical styles, so they often take a formalistic and sometimes stilted form.<sup>4</sup> Nonetheless, the claims determine what exactly the patent owner may exclude others from doing.<sup>5</sup> Given the great impact claim construction may have on the outcome of a case, the court's construction of the claims of a patent may be case dispositive or drastically affect the prospect of settlement. Thus, while not technically a dispositive ruling, claim construction can have outcome-determinative effects.

Accordingly, litigants usually spend significant resources disputing the meaning of each claim term at issue in a suit.<sup>6</sup> Before 1996, the case law remained unclear as to whether the jury or the court should determine the proper interpretation of patent claims.<sup>7</sup> This issue was laid to rest in the case of *Markman v. Westview Instruments* ("Markman I"), where an *en banc* panel of the Federal Circuit declared claim interpretation to be a matter of law for

<sup>4</sup> *Slimfold Mfg. Co. v. Kinkead Indus., Inc.*, 810 F.2d 1113, 1 U.S.P.Q.2d (BNA) 1563 (Fed. Cir. 1987). For instance, each patent claim must be in the form of a single sentence. U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 608.01m (8th ed. 2001) (hereinafter MPEP).

<sup>5</sup> 35 U.S.C. § 271 (2000).

<sup>6</sup> Patents may contain hundreds of claims. A litigant need not assert all claims in a suit, but often more than one claim is asserted. FED. R. CIV. P. 8(a); 35 U.S.C. § 282 (Supp. 2003); see also 37 C.F.R. § 1.75 (2002).

<sup>7</sup> *Compare, e.g.,* *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 974, 226 U.S.P.Q. (BNA) 5, 7-8 (Fed. Cir. 1985), *with* *Tol-O-Matic, Inc. v. Proma Produkt- und Marketing Gesellschaft m.b.H.*, 945 F.2d 1546, 1550, 20 U.S.P.Q.2d (BNA) 1332, 1336 (Fed. Cir. 1991).

the court to decide.<sup>8</sup> The United States Supreme Court affirmed this holding ("*Markman II*").<sup>9</sup>

In light of the *Markman* cases, a variety of procedures have been proposed on how the court should engage in the process of claim construction. The purpose of this article is to review some of the more significant rules of claim construction and survey some of the procedures examined by the Federal Circuit since *Markman I* and *II*. Claim construction procedures, of course, must be appropriately tailored to the needs of each case.

Before beginning this summary, however, one more introductory note is appropriate. Some commentators, practitioners, and judges have come to refer to claim construction as conducting a "*Markman* Hearing." The use of the word "hearing" may imply the taking of testimony.<sup>10</sup> As set out below, however, neither testimony nor oral argument is necessarily required for claim construction. Therefore, the Subcommittee has adopted the phrase "*Markman* Proceeding" as a more appropriate term.

<sup>8</sup> *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 U.S.P.Q.2d (BNA) 1321, 1329 (Fed. Cir. 1995) (en banc) (hereinafter *Markman I*), *aff'd*, 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996) (hereinafter *Markman II*).

("[C]ompetitors should be able to rest assured, if infringement litigation occurs, that a judge, trained in the law, will similarly analyze the text of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and consistent scope of the patent owner's rights to be given legal effect.").

<sup>9</sup> *Markman II*, 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996).

<sup>10</sup> BLACK'S LAW DICTIONARY 725 (7th ed. 1999).

## II. THE *MARKMAN* DECISION: CLAIM CONSTRUCTION IS A QUESTION OF LAW FOR THE COURT

In its landmark decision, *Markman I*, an *en banc* panel of the United States Court of Appeals for the Federal Circuit<sup>11</sup> held that claim construction is a question of law exclusively for the court, ending the debate.<sup>12</sup> The United States Supreme Court affirmed that claim construction is for the court in *Markman II* but made no ruling one way or the other regarding whether claim construction requires resolution of underlying issues of fact.<sup>13</sup>

### A. The Facts of *Markman*

The dispute in *Markman* focused on the meaning of the term "inventory" in a patent claim covering a system for monitoring "inventory" for a dry-cleaning establishment.<sup>14</sup> *Markman*'s patented system permitted the user to input information concerning articles to be cleaned and

<sup>11</sup> The Federal Circuit has exclusive appellate jurisdiction over all appeals, regardless of regional circuit, from cases arising under the Patent Laws. 28 U.S.C. § 1295 (2000); *Holmes Group, Inc. v. Vornado Air Circulation Sys.*, 535 U.S. 826, 830, 62 U.S.P.Q.2d (BNA) 1801, 1803 (2002) ("arising under Patent Laws" interpreted to mean claims in well-pleaded complaint, not in counterclaim).

<sup>12</sup> *Markman I*, 52 F.3d at 979, 34 U.S.P.Q.2d (BNA) at 1329. The decision resolved a split of authority in the Federal Circuit's precedent regarding the proper allocation of claim construction as between judge (a question of law) and jury (a question of fact). *Id.* One line of cases had held that the entirety of claim construction was a question of law for the court, whereas a competing line of cases suggested that it might involve underlying factual inquiries for the jury to decide. *Id.* at 976-77, 34 U.S.P.Q.2d (BNA) at 1327-28.

<sup>13</sup> *Markman II*, 517 U.S. at 391, 38 U.S.P.Q.2d (BNA) at 1471.

<sup>14</sup> *Id.* at 374, 38 U.S.P.Q.2d (BNA) at 1464.

generated bar-coded tags to attach to the articles.<sup>15</sup> Employees of the cleaning establishment then could use bar-code readers to track the status of the articles being cleaned.

In response to Markman's charge of patent infringement, Westview contended that its product, which was capable of tracking invoices or cash totals during the cleaning process but not specific articles of clothing, did not

<sup>15</sup> *Markman I*, 52 F.3d at 971, 34 U.S.P.Q.2d (BNA) at 1323. The full claim at issue in *Markman I* read as follows:

1. The inventory control and reporting system, comprising:
    - a data input device for manual operation by an attendant, the input device having switch means operable to encode information relating to sequential transactions, each of the transactions having articles associated therewith, said information including transaction identity and descriptions of each of said articles associated with the transactions; a data processor including memory operable to record said information and means to maintain an inventory total, said data processor having means to associate sequential transactions with unique sequential indicia and to generate at least one report of said total and said transactions, the unique sequential indicia and the descriptions of articles in the sequential transactions being reconcilable against one another; a dot matrix printer operable under control of the data processor to generate a written record of the indicia associated with sequential transactions, the written record including optically-detectable bar codes having a series of contrasting spaced bands, the bar codes being printed only in coincidence with each said transaction and at least part of the written record bearing a portion to be attached to said articles; and, at least one optical scanner connected to the data processor and operable to detect said bar codes on all articles passing a predetermined station, whereby said system can detect and localize spurious additions to inventory as well as spurious deletions therefrom.
- Id.* at 972, 34 U.S.P.Q.2d (BNA) at 1323.

monitor "inventory" as the claim required.<sup>16</sup> Markman, on the other hand, contended that "inventory" was not limited to articles of clothing but could also mean "invoices" or "cash."<sup>17</sup> Markman offered, *inter alia*, the following evidence in support of his claim construction: (1) his own testimony as the inventor about the meaning of "inventory", (2) testimony of a "patent expert" about the meaning of the claim terms, and (3) Westview's sales literature and the testimony of its president.<sup>18</sup>

The Federal Circuit rejected Markman's evidence. It construed the claim term "inventory" as a matter of law and held that it referred, at least in part, to articles of clothing.<sup>19</sup> The Federal Circuit relied primarily on the public patent documents—the "intrinsic evidence" of the patent and its prosecution history<sup>20</sup>—in arriving at this claim construction.<sup>21</sup> Accordingly, because Westview's system was not capable of monitoring articles of clothing, it did not infringe.

### B. The Notice Function of Claims

<sup>16</sup> *Id.* at 972, 34 U.S.P.Q.2d (BNA) at 1324.

<sup>17</sup> *Id.* at 975, 34 U.S.P.Q.2d (BNA) at 1325-26.

<sup>18</sup> *Id.* at 973, 34 U.S.P.Q.2d (BNA) at 1324.

<sup>19</sup> *Id.* at 982, 34 U.S.P.Q.2d (BNA) at 1331.

<sup>20</sup> The phrases "prosecution history," "file history," and "file wrapper" all are synonyms referring to the record of communications between the applicant and the PTO during the patent application process. *Golden Voice Tech. & Training, L.L.C. v. Rockwell Firstpoint Contact Corp.*, 267 F. Supp. 2d 1190, 1195 n.6 (M.D. Fla. 2003). The file is a public record. 37 C.F.R. § 1.11 (2002).

<sup>21</sup> *Markman I*, 52 F.3d at 980, 34 U.S.P.Q.2d (BNA) at 1330.

In ruling that claim construction is a question of law for the court to decide, *Markman I* emphasized the need for the public to have notice of the scope of the patent claims.<sup>22</sup> The Supreme Court in *Markman II* echoed this reasoning, stating that if the limits of a patent are not known, a "zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field."<sup>23</sup> Only by knowing the scope of a patent's claims can a competitor successfully design around the patent or make an informed decision concerning whether to abandon its product or process altogether.

The Federal Circuit reasoned that public notice is best served if competitors know that courts will apply established rules of claim construction to publicly available patent documents.<sup>24</sup> This reasoning focuses on the publicly available patent documents—or "intrinsic evidence"—for the claim construction analysis. Shortly after its *Markman I* decision, the court further explained in *Vitronics Corp. v. Conceptiontronic, Inc.* that "[a]llowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make [the right to public notice] meaningless."<sup>25</sup>

### C. Extrinsic Evidence

Nevertheless, *Markman I* indicated that it is permissible, and may in some circumstances be necessary, for a court to evaluate evidence extrinsic

<sup>22</sup> *Id.* at 978, 34 U.S.P.Q.2d (BNA) at 1329.

<sup>23</sup> *Markman II*, 517 U.S. at 390, 38 U.S.P.Q.2d (BNA) at 1470 (citation omitted).

<sup>24</sup> *Markman I*, 52 F.3d at 978-79, 34 U.S.P.Q.2d (BNA) at 1329.

<sup>25</sup> 90 F.3d 1576, 1583, 39 U.S.P.Q.2d (BNA) 1573, 1577 (Fed. Cir. 1996).

to the public patent documents in construing the claims.<sup>26</sup> According to the Federal Circuit, a district court's consideration of such extrinsic evidence, including conflicting expert testimony, does not create issues of fact:

Through this process of construing claims by, among other things, using certain extrinsic evidence that the court finds helpful and rejecting other evidence as unhelpful, and resolving disputes *en route* to pronouncing the meaning of claim language as a matter of law based on the patent documents themselves, the court is *not* crediting certain evidence over other evidence or making factual evidentiary findings. Rather, the court is looking to the extrinsic evidence to assist in its construction of the written document, a task it is required to perform. The district court's claim construction, enlightened by such extrinsic evidence as may be helpful, is still based upon the patent and prosecution history. It is therefore still construction, and is a matter of law subject to *de novo* review.<sup>27</sup>

Although the Supreme Court in *Markman II* did not disturb the Federal Circuit's holding that claim construction is a question of law, it recognized that claim construction is rooted in "evidentiary underpinnings."<sup>28</sup> The Court characterized claim construction as a "mongrel

<sup>26</sup> *Markman I*, 52 F.3d at 980, 34 U.S.P.Q.2d (BNA) at 1330.

<sup>27</sup> *Id.* at 981, 34 U.S.P.Q.2d (BNA) at 1331.

<sup>28</sup> *Markman II*, 517 U.S. at 390, 38 U.S.P.Q.2d (BNA) at 1470.

practice"<sup>29</sup> that "falls somewhere between a pristine legal standard and a simple historical fact."<sup>30</sup>

### III. THE PARTS OF A PATENT

#### A. The Specification

A United States patent consists of a written text and, if applicable, a set of drawings.<sup>31</sup> This is called "the specification," and it must enable a person of ordinary skill in the art to make and use the invention.<sup>32</sup> Although the claims are actually the concluding part of the specification, particularly as initially filed, the word "specification" is often used in a colloquial fashion to refer to the written body other than the claims.<sup>33</sup>

The written text that forms the body of a patent typically includes a short introductory abstract of the invention, a description of the field of the invention, a description of the background of the invention (including a discussion of prior technology and shortcomings thereof), a summary of the invention, a brief discussion of the drawings, and a detailed description of

<sup>29</sup> *Id.* at 378, 38 U.S.P.Q.2d (BNA) at 1465.

<sup>30</sup> *Id.* at 388, 38 U.S.P.Q.2d (BNA) at 1470 (citation omitted).

<sup>31</sup> 35 U.S.C. §§ 112, 113 (2000).

<sup>32</sup> 35 U.S.C. § 112, ¶ 1 (2000).

<sup>33</sup> The specification concludes with "one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2.

the invention.<sup>34</sup> The detailed description includes a discussion of particular embodiments or examples of the invention, often with references to any drawings.<sup>35</sup>

#### B. The Claims: *The Metes and Bounds of the Patent*

The claims of a patent define the patent holder's right to exclude others. Each claim is a unitary entity, in that it must be considered as a whole.<sup>36</sup> Only the combination of elements in its entirety comprises claimed subject matter.<sup>37</sup> Take, for example, a claim to a process for unlocking a door which involves three steps: removing a key chain with one or more keys from a pocket or bag (step "A"), followed by selecting the proper key to unlock a door based upon a color-coded system (step "B"), followed by unlocking the door (step "C"). It defines, as a matter of law, *only* the A-B-C process. No single step is "claimed," only the combination of all three steps. Thus, there is no right to prevent others from using one step or even two steps, apart from the combination of all three steps A-B-C. For instance, step C, unlocking a door, is not "patented."<sup>38</sup>

Claims are typically written in a form that has three sections: (1) a preamble, which generally sets out the context or type of invention being claimed; (2) a transition, which often uses a form of the words "comprise" or "consist" to introduce the formal elements of the claim; and (3) one or more "elements" in the body of the claim, also called "limitations," that define the scope of the claim by, for example, its parts, ingredients, or

<sup>34</sup> 37 C.F.R. § 1.51 (2002).

<sup>35</sup> *Id.*

<sup>36</sup> *Gen. Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1274, 23 U.S.P.Q.2d (BNA) 1839, 1840 (Fed. Cir. 1992).

<sup>37</sup> *Id.*

<sup>38</sup> *See id.*

steps.<sup>39</sup> Because the vast majority of claims are written in this form, the parts will be addressed in turn.

### 1. Claim Preambles and Their Effect on Claim Scope

The words of a preamble establish some background or context for the patent claim.<sup>40</sup> Continuing with the three-step claim example above, a preamble might be: A method for unlocking a door. Usually, the preamble does not limit the scope of the claim, but it may be read to shed light on the meaning of the claim terms and to define the invention.<sup>41</sup>

In some situations, the preamble may serve to limit the claim based upon the circumstances. The question of whether to treat a preamble as a claim limitation is "resolved only on review of the entire[ ] . . . patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim."<sup>42</sup> If the words of the preamble simply state the intended use or purpose of the invention, then they do not limit the scope

<sup>39</sup> MARTIN J. ADELMAN ET AL., CASES AND MATERIALS ON PATENT LAW 534 (2d ed. 2003).

<sup>40</sup> ADELMAN, *supra* note 39, at 534.

<sup>41</sup> Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1346, 63 U.S.P.Q.2d (BNA) 1769, 1774 (Fed. Cir. 2002).

<sup>42</sup> Corning Glass Works v. Sumitomo Elec. U.S.A., Inc., 868 F.2d 1251, 1257, 9 U.S.P.Q.2d (BNA) 1962, 1966 (Fed. Cir. 1989); see Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc., 98 F.3d 1563, 1572-73, 40 U.S.P.Q.2d (BNA) 1481, 1488 (Fed. Cir. 1996) ("Whether a preamble stating the purpose and context of the invention constitutes a limitation of the claimed process is determined on the facts of each case in light of the overall form of the claim, and the invention as described in the specification and illuminated in the prosecution history.").

of the claim.<sup>43</sup> The preamble also does not limit claim scope when it merely serves to define the environment in which the invention is to be used or operated.<sup>44</sup>

Where patentability depends upon limitations in the preamble or when the preamble contributes to the definition of the claimed invention, then the preamble may limit the claim.<sup>45</sup> If the preamble recites structure that is acted on by the elements of an apparatus or process claim, it should be considered in interpreting the claim.<sup>46</sup> The Federal Circuit has stressed that preamble language acts as a claim limitation only when the language serves to give "life, meaning, and vitality"<sup>47</sup> to the claim and properly define the invention.<sup>48</sup> Whether the preamble gives "life, meaning, and vitality" to the claim is determined "on the facts of each case in view of the claimed

<sup>43</sup> See C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1350, 48 U.S.P.Q.2d (BNA) 1225, 1231 (Fed. Cir. 1998).

<sup>44</sup> See Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 229 F.3d 801, 810, 62 U.S.P.Q.2d (BNA) 1781, 1786 (Fed. Cir. 2002).

<sup>45</sup> C.R. Bard, 157 F.3d at 1350, 48 U.S.P.Q.2d (BNA) at 1230-31.

<sup>46</sup> Rowe v. Dror, 112 F.3d 473, 478-79, 42 U.S.P.Q.2d (BNA) 1550, 1553 (Fed. Cir. 1997).

<sup>47</sup> Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 U.S.P.Q.2d (BNA) 1161, 1165 (Fed. Cir. 1999) (citations omitted).

<sup>48</sup> Apple Computer, Inc. v. Articulate Sys., Inc., 234 F.3d 14, 22 (Fed. Cir. 2000) (citing *In re Paulsen*, 30 F.3d 1475, 1479, 31 U.S.P.Q.2d (BNA) 1671, 1673 (Fed. Cir. 1994)); see also *Allen Eng'g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1346, 63 U.S.P.Q.2d (BNA) 1769, 1774 (Fed. Cir. 2002); *Pitney Bowes*, 182 F.3d at 1305, 51 U.S.P.Q.2d (BNA) at 1165.

invention as a whole.”<sup>49</sup> There is no litmus test for whether a preamble limits the claim scope.<sup>50</sup>

As the court in *Catalina Marketing International, Inc. v. Coolsavings.com, Inc.* noted, however, guideposts do exist.<sup>51</sup> For example, the preamble of a claim written in so-called “Jepson” format limits claim scope.<sup>52</sup> When a claim element depends on a disputed preamble (i.e., incorporates the language of the prior claim), it may indicate reliance on the preamble to define the claimed invention, which limits the claim scope.<sup>53</sup> Similarly, “when the preamble is essential to understand limitations or terms in the claim body, the preamble limits claim scope.”<sup>54</sup> If the specification underscores a recitation of a preamble structure or step, it may also treat the preamble as a claim limitation.<sup>55</sup>

It is also important to note that “clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance

<sup>49</sup> *Allen Eng’g*, 299 F.3d at 1346, 63 U.S.P.Q.2d (BNA) at 1774.

<sup>50</sup> *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808, 62 U.S.P.Q.2d (BNA) 1781, 1785 (Fed. Cir. 2002); *Coming Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 U.S.P.Q.2d (BNA) 1962, 1966 (Fed. Cir. 1989).

<sup>51</sup> *Catalina Mktg. Int’l*, 289 F.3d at 808, 62 U.S.P.Q.2d (BNA) at 1785.

<sup>52</sup> *Id.* Jepson claims are explained *infra* Part III.B.4 of this article.

<sup>53</sup> *Id.* (citing *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 U.S.P.Q.2d (BNA) 1816, 1820 (Fed. Cir. 1995)); see also *infra* Part III.B.3.c.

<sup>54</sup> *Id.* (citing *Pitney Bowes*, 182 F.3d at 1306, 51 U.S.P.Q.2d (BNA) at 1165).

<sup>55</sup> *Id.*

indicates the use of the preamble to define, in part, the claimed invention.”<sup>56</sup> Where there is no such reliance, however, “a preamble generally is not limiting when the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention.”<sup>57</sup> This means that a preamble that only praises the features or benefits of a claimed invention does not limit the claim scope.<sup>58</sup> Similarly, preambles that describe “the use of an invention generally do not limit the claims because the patentability of apparatus or composition claims depends on the claimed structure, not the use or purpose of that structure.”<sup>59</sup>

<sup>56</sup> *Id.*, 62 U.S.P.Q.2d (BNA) at 1785.

<sup>57</sup> *Id.* at 809, 62 U.S.P.Q.2d (BNA) at 1785 (citing *IMS Tech. Co., Inc. v. Haas Automation Co., Inc.*, 206 F.3d 1422, 1434, 54 U.S.P.Q.2d (BNA) 1129, 1136-37 (Fed. Cir. 2000)).

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

## 2. Transitional Phrases in Claims

Between the preamble and the body of the claim there usually is a transitional word or phrase.<sup>60</sup> The placement of the transitional word or phrase can materially affect the scope of the claim because it indicates where the background preamble ends and where the body begins.<sup>61</sup> Commonly used transitional words and phrases include: "comprising," "consisting essentially of," and "consisting of."<sup>62</sup> Occasionally, "including" or "containing" is used as a transitional word.<sup>63</sup>

### a. "Comprising" and "Including"

When used as transitional words, "comprising," "having" and "including" are equivalent to each other.<sup>64</sup> They are "open-ended," and so they do not exclude the possibility of additional structure or steps.<sup>65</sup> Thus, the claim to a method for unlocking a door written as "comprising" steps A, B, and C, should be construed so that it does not exclude an accused device having a fourth step D in addition to steps A, B and C (where, for instance,

<sup>60</sup> 2 DONALD S. CHISUM, CHISUM ON PATENTS § 8.06[1][b] (1984).

<sup>61</sup> STEPHEN A. BECKER, PATENT APPLICATIONS HANDBOOK 67-68 (2003).

<sup>62</sup> 2 CHISUM, *supra* note 60, § 8.06[1][b][iii].

<sup>63</sup> *Id.*; ROBERT C. FABER, LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING § 7 (4th ed. 2002).

<sup>64</sup> Toro Co. v. White Consol. Indus., 199 F.3d 1295, 1303, 53 U.S.P.Q.2d (BNA) 1065, 1069 (Fed. Cir. 1999) (Rader, J., dissenting) (citation omitted).

<sup>65</sup> See 2 CHISUM, *supra* note 60, § 8.06[1][b][iii].

step D involves separating the selected key from the ring of keys before use).<sup>66</sup>

### b. "Consisting of"

When the term "consisting of" introduces the elements of a claim, the claim is restricted to only those elements, steps, or ingredients listed.<sup>67</sup> Claims utilizing "consisting of" language encompass only those devices or processes that involve all of the elements recited in the patent claim and no more.<sup>68</sup> Changing the sample claim's transitional phrase from "comprising" to "consisting of" limits the construction of the claim to include only steps A, B, and C. Adding an additional step D, therefore, would avoid infringement.

### c. "Consisting essentially of"

"Consisting essentially of" is a transitional phrase that is less limiting than "consisting of."<sup>69</sup> This phrase excludes additional structure, elements, or steps which would *materially* affect the properties of the claimed

<sup>66</sup> See *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261 (Fed. Cir. 1986).

<sup>67</sup> *Ex parte Davis*, 80 U.S.P.Q. (BNA) 448, 450 (Pat. Off. Bd. App. 1948).

<sup>68</sup> See *Georgia-Pacific Corp. v. U.S. Gypsum Co.*, 195 F.3d 1322, 1327 (Fed. Cir. 1999); 2 CHISUM, *supra* note 60, § 8.06[1][b]; 2 PETER D. ROSENBERG, PATENT LAW FUNDAMENTALS § 14.05[2] (1984).

<sup>69</sup> *AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1245, 57 U.S.P.Q.2d (BNA) 1776, 1781 (Fed. Cir. 2001) (treating "composed of" the same as "consisting essentially of").

invention.<sup>70</sup> Patent attorneys often use this transition for claims to chemical compositions. This ensures that the claim reads upon products, including impurities and carriers, that do not materially change the properties of the claimed composition.<sup>71</sup> For example, if our sample claim used the transitional phrase "consisting essentially of," then adding step D would only avoid infringement if step D was material in view of steps A, B, and C; otherwise A, B, C, and D would infringe. At least one case has considered whether additional components were "material" as part of claim construction.<sup>72</sup>

### 3. The Body of a Claim

The body of a claim covering an article, machine, or process has a series of phrases setting forth the structural limitations, elements, or steps in the invention.<sup>73</sup> Cooperation among these elements, or a functional relationship between the elements, must be liberally defined by the patentee. Typically, the meaning of those elements, described in different ways depending on the technology or desired result, or both, are the key to claim construction.

<sup>70</sup> *In re Janakirama-Rao*, 317 F.2d 951, 952, 137 U.S.P.Q. (BNA) 893, 894 (C.C.P.A. 1963); *Ex parte Davis*, 80 U.S.P.Q. (BNA) at 450.

<sup>71</sup> *In re Herz*, 537 F.2d 549, 551, 190 U.S.P.Q. (BNA) 461, 463 (C.C.P.A. 1976), *cited with approval in* Atlas Powder Co. v. E.I. du Pont de Nemours & Co., 750 F.2d 1569, 1574, 224 U.S.P.Q. (BNA) 409, 412 (Fed. Cir. 1984).

<sup>72</sup> *AFG Indus.*, 239 F.3d at 1243, 57 U.S.P.Q.2d (BNA) at 1776. *See infra* Part V.C (concerning the separate consideration of an accused device/process from claim construction).

<sup>73</sup> *See* 37 C.F.R. § 1.75 (2002); 2 ROSENBERG, *supra* note 68, § 14.05[3].

#### a. *Elements as Understood by Those Skilled in the Art*

Claim elements, sometimes set off as sub-paragraphs,<sup>74</sup> serve to frame the infringement inquiry.<sup>75</sup> Each claim element generally requires the existence of a particular structural component or a particular step.<sup>76</sup> For example, a structural claim element may be "a lock," whereas a process claim element may be "unlocking a lock." Typically, the parsing and interpretation of claim elements to determine how they would be understood by one skilled in the art is a major focus of the claim construction exercise. It is important to keep in mind that claims are written for those skilled in the art; they are "not a self-contained explanation of every step."<sup>77</sup>

#### b. *Means-Plus-Function Claim Elements*

Instead of reciting a specific structure or act, the patentee may express a claim element "as a means or step for performing a specified function without the recital of structure, material, or acts in support

<sup>74</sup> *E.g.*, *Markman I*, 52 F.3d 967, 972, 34 U.S.P.Q.2d (BNA) 1321, 1323 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996).

<sup>75</sup> It is not the purpose of this article to recount the law concerning an invalid issued patent. Nonetheless, it is useful to note that the elements of a claim also frame the analysis of whether the claim is invalid in view of earlier actions or publicly known information (called "prior art"). If the PTO, or a judge or jury, determines that a piece of prior art discloses all of the elements of a claim (i.e., "anticipates" the claim) or discloses enough of the claim to render it "obvious," then the claim is invalid. 35 U.S.C. §§ 102, 103 (2000).

<sup>76</sup> *Markman I*, 52 F.3d 967 at 972, 34 U.S.P.Q.2d (BNA) at 1323.

<sup>77</sup> *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1369, 59 U.S.P.Q.2d (BNA) 1745, 1748 (Fed. Cir. 2001).

thereof.”<sup>78</sup> For example, a claim directed to a door lock might call it a “means for releasably securing a door.” Such a “means-plus-function” claim limitation does not encompass all possibilities but covers only “the corresponding structure, material, or acts described in the specification and equivalents thereof.”<sup>79</sup>

c. *Independent and Dependent Claims*

Claims can be written in either “independent” or “dependent” form, as mentioned earlier.<sup>80</sup> An easy way to differentiate between the two is that a dependent claim specifically refers to an earlier claim by its claim number whereas an independent claim does not.<sup>81</sup> While it is unusual, a dependent claim may refer to more than one claim in which case it is called a “multiple dependent.”<sup>82</sup>

A dependent claim may depend from an independent claim or another dependent claim. When a claim depends from another it incorporates all of the limitations of the claim or claims from which it depends and builds upon the prior claim by adding—but not removing—one or more additional limitations specific to the dependent

<sup>78</sup> 35 U.S.C. § 112, ¶ 6 (2000).

<sup>79</sup> *Id.* Construction of claims using “means-plus-function” language is treated in more detail *infra* Part IV.E.

<sup>80</sup> 37 C.F.R. § 1.75(c) (2002).

<sup>81</sup> *See id.*

<sup>82</sup> *Id.* The form of a multiple dependent claim is “The invention of claim X, Y or Z” but not “[t]he invention according to claims L, M and N.” MPEP, *supra* note 4, § 608.01(n). An “or” is used as the conjunction because claims cannot be cumulative. *Id.* A multiple dependent claim must be considered for each permutation. *Id.*

claim.<sup>83</sup> Thus, a dependent claim is necessarily narrower than the claim or claims from which it depends because it adds an additional element or limits the range for an element.

d. *Functional Language: “Whereby” and “Wherein”*

Patentees often include additional functional language in a claim that describes the advantageous result of the claimed subject matter. This addition is often achieved through the use of a clause beginning with “whereby” or “wherein,” typically found at the end of a claim or group of elements.<sup>84</sup> Functional language serves to limit the scope of the claim unless the limitation merely states the inherent function of the other limitations.<sup>85</sup>

#### 4. Jepson Claims

There is a special, stylized form of claim that takes on a different construction, called a “Jepson claim.” The preamble in a Jepson claim, unlike other types of claims, sets forth the prior art improved upon by the invention described in the body of the claim, and the transition typically is “the improvement comprising.”<sup>86</sup> To continue the example of a method of unlocking a door, a claim written in Jepson-style where A-B-C was in the prior art might read:

A method of unlocking a door by removing a key chain with one or more keys, selecting a key and unlocking a lock, *the*

<sup>83</sup> MPEP, *supra* note 4, § 608.01(n).

<sup>84</sup> *See, e.g.,* Tex. Instruments, Inc. v. U.S. Int’l Trade Comm’n, 988 F.2d 1165, 1169, 26 U.S.P.Q.2d (BNA) 1018, 1021 (Fed. Cir. 1993).

<sup>85</sup> *Id.* at 1172, 26 U.S.P.Q.2d (BNA) at 1023 (“A ‘whereby’ clause that merely states the result of the limitations in the claim adds nothing to the patentability or substance of the claim.”).

<sup>86</sup> *See ex parte* Jepson, 1917 C.D. 62, 243 O.G. 525 (Dec. Comm’r Pat. 1917).

*improvement comprising* selecting the key based upon a color-coded system.

In this claim, the phrase “the improvement comprising” is the transition, since it separates the preamble from the body. The subject matter in the preamble of a Jepson-type claim, i.e., everything before the transition, presumptively serves as an admission that it is relevant prior art.<sup>87</sup> Although a preamble is impliedly admitted to be prior art when a Jepson claim is used (unless the preamble is the inventor’s own work or the circumstances indicate it should not be considered prior art),<sup>88</sup> the claimed invention consists of the preamble in combination with the improvement.<sup>89</sup>

#### IV. EVIDENCE THE COURT MAY CONSIDER IN CONSTRUING CLAIMS

To construe a claim, a court must interpret it from the perspective of one of ordinary skill in the art, rather than that of counsel or retained expert witnesses.<sup>90</sup> A consideration in claim construction is whether the patent has given adequate public notice of the proposed construction.<sup>91</sup> The Federal Circuit explained it as follows:

<sup>87</sup> *In re Fout*, 675 F.2d 297, 299, 213 U.S.P.Q. (BNA) 32, 534 (C.C.P.A. 1982).

<sup>88</sup> *Reading & Bates Constr. Co. v. Baker Energy Res. Corp.*, 748 F.2d 645, 650, 233 U.S.P.Q. (BNA) 1168, 1171-72 (Fed. Cir. 1984).

<sup>89</sup> *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 315, 227 U.S.P.Q. (BNA) 768, 770 (Fed. Cir. 1985).

<sup>90</sup> *Dayco Prods., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1324, 59 U.S.P.Q.2d (BNA) 1489, 1494-95 (Fed. Cir. 2001).

<sup>91</sup> *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1583, 39 U.S.P.Q.2d (BNA) 1573, 1577 (Fed. Cir. 1996).

If an argument offered in support of a particular claim construction is so convoluted and artificial that it would not be apparent to a skilled artisan reading the patent and the prosecution history, the argument is simply unhelpful to the performance of our task. With this standard in mind we approach the correct claim construction here.<sup>92</sup>

#### A. *Intrinsic Evidence*

In construing claim language, a court should first consider the evidence “intrinsic” to the patent.<sup>93</sup> Intrinsic evidence includes the entire patent document (e.g., claims, drawings, and specification) and, if in evidence, the prosecution history, all of which are publicly available.<sup>94</sup> “[I]ntrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.”<sup>95</sup> While that point is not typically disputed, it is important to note that “[a]ll intrinsic evidence is not equal.”<sup>96</sup>

<sup>92</sup> *Dayco Prods.*, 258 F.3d at 1324, 59 U.S.P.Q.2d (BNA) at 1495.

<sup>93</sup> *Vitronics*, 90 F.3d at 1582, 39 U.S.P.Q.2d (BNA) at 1576.

<sup>94</sup> *Id.*

<sup>95</sup> *Id.*

<sup>96</sup> *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331, 59 U.S.P.Q.2d (BNA) 1401, 1407 (Fed. Cir. 2001).

## 1. The Claims: Ordinary Meaning is Presumed

"In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to 'particularly point[] out and distinctly claim[] the subject matter which [he] regards as his invention.'"<sup>97</sup> The courts have consistently employed a "heavy presumption" that the ordinary meaning of the claim term given by those of ordinary skill in the art applies.<sup>98</sup> To determine the ordinary meaning of a claim term, a court may review a variety of sources, including intrinsic evidence like the claims, written description, and prosecution history, as well as treatises and dictionaries.<sup>99</sup> Dictionaries, encyclopedias, and treatises — although technically extrinsic to the patent<sup>100</sup> — "may be the most meaningful sources of information to aid judges in better understanding both the technology and the terminology used by those skilled in the art to describe the technology."<sup>101</sup>

<sup>97</sup> *Id.*, 59 U.S.P.Q.2d (BNA) at 1406 (citing 35 U.S.C. § 112).

<sup>98</sup> *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366, 62 U.S.P.Q.2d (BNA) 1658, 1662 (Fed. Cir. 2002); *Johnson Worldwide Assoc. v. Zebco Corp.*, 175 F.3d 985, 989, 50 U.S.P.Q.2d (BNA) 1607, 1610 (Fed. Cir. 1999).

<sup>99</sup> *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325, 63 U.S.P.Q.2d (BNA) 1374, 1380 (Fed. Cir. 2002).

<sup>100</sup> See *infra* Part IV.B & C.1.

<sup>101</sup> *Tex. Digital Sys. v. Telegenix, Inc.*, 308 F.3d 1193, 1203, 64 U.S.P.Q.2d (BNA) 1812, 1818-19 (Fed. Cir. 2002) ("If more than one dictionary definition is consistent with the use of the words in the intrinsic record, the claim terms may be construed to encompass all such consistent meanings.").

## 2. Comparing Claims in the Same Patent

In considering the meaning of a particular claim term, it is often helpful to consider that term in the context of the other language in the same claim.<sup>102</sup> For example, in *Markman I*, the Federal Circuit noted that the claim required the system to be able to "detect and localize spurious additions to inventory as well as spurious deletions therefrom."<sup>103</sup> In view of this surrounding claim language, the court found Markman's construction of "inventory" to include "invoices" or "cash" and not just "articles of clothing" to be implausible.<sup>104</sup>

It also is useful to consider other claims in the same patent, whether or not those other claims are asserted in the lawsuit.<sup>105</sup> One method involving the use of other claims has been labeled the doctrine of "claim differentiation." Under this doctrine, the court generally should avoid an interpretation that renders two claims redundant, unless it is clear that they

<sup>102</sup> See, e.g., *Markman I*, 52 F.3d 967, 979, 34 U.S.P.Q.2d (BNA) 1321, 1329 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996).

<sup>103</sup> *Id.* at 982, 34 U.S.P.Q.2d (BNA) at 1331.

<sup>104</sup> *Id.* ("[T]he claim phrase 'detect and localize spurious additions to inventory as well as spurious deletions therefrom' does not make sense using Markman's definition of 'inventory.' Dollars or invoice totals are not 'localized' since dollars do not travel through the cleaning process and the location of invoices is irrelevant. Location is relevant to clothing, since it moves through and sometimes without the establishment, where it can be lost, stolen, or damaged. Also, 'spurious' additions and deletions logically relate to clothing because 'dollars' would not be spuriously added to a dry-cleaner's inventory. Thus, the language of the claim itself suggests the conclusion that the dry-cleaner's 'inventory' includes clothing.").

<sup>105</sup> *Robotic Vision Sys., Inc. v. View Eng'g, Inc.*, 189 F.3d 1370, 1376 (Fed. Cir. 1999).

are to be understood as being synonymous.<sup>106</sup> When different words or phrases are used in separate claims, the claims presumably have a "significant" difference in meaning and scope.<sup>107</sup> This doctrine applies with greatest force when "there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims."<sup>108</sup> Claim differentiation, however, is more a guide to construction than an absolute rule.<sup>109</sup>

<sup>106</sup> *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (citing *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 404, 155 U.S.P.Q. (BNA) 697, 708 (Ct. Cl. 1967)) (applying the doctrine of claim differentiation to claims involving a means-plus-function element); *see, e.g., Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233, 57 U.S.P.Q.2d (BNA) 1679, 1685 (Fed. Cir. 2001); *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1341, 56 U.S.P.Q.2d (BNA) 1014, 1019 (Fed. Cir. 2000); *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1368, 53 U.S.P.Q.2d (BNA) 1814, 1818 (Fed. Cir. 2000).

<sup>107</sup> *Toro Co. v. White Consol. Indus.*, 199 F.3d 1295, 1302, 53 U.S.P.Q.2d (BNA), 1065, 1070 (Fed. Cir. 1999) (citations omitted); *Comark Comm., Inc. v. Harris Corp.*, 156 F.3d 1182, 1187, 48 U.S.P.Q.2d (BNA) 1001, 1005 (Fed. Cir. 1998). *But see* *Fromson v. Anitec Printing Plates Inc.*, 132 F.3d 1437, 1445, 45 U.S.P.Q.2d (BNA) 1269, 1274 (Fed. Cir. 1997) (recognizing limits to the doctrine), *overruled on other grounds by* *Cybor Corp. v. FASTechs, Inc.*, 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998).

<sup>108</sup> *Wenger Mfg.*, 239 F.3d at 1233, 57 U.S.P.Q.2d (BNA) at 1685.

<sup>109</sup> *See, e.g., Kraft Foods*, 203 F.3d at 1368, 53 U.S.P.Q.2d (BNA) at 1818.

Finally, the court should give claim terms a consistent meaning when used similarly and consistently in other claims.<sup>110</sup> This axiom of construction applies not only to claims in the same patent but to all claims that share a common ancestry.<sup>111</sup> When the patentee has used the claim term in a different manner, however, the court should not necessarily give the term the same meaning in both claims.<sup>112</sup>

<sup>110</sup> *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 U.S.P.Q.2d (BNA) 1851, 1854 (Fed. Cir. 2001); *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1159, 42 U.S.P.Q.2d (BNA) 1577, 1586 (Fed. Cir. 1997) ("[W]e are obliged to construe the term 'elasticity' consistently throughout the claims.").

<sup>111</sup> *Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1030-31, 61 U.S.P.Q.2d (BNA) 1470, 1476 (Fed. Cir. 2002); *Elkay Mfg. Comp. v. Elbco Mfg. Co.*, 192 F.3d 973, 980, 52 U.S.P.Q.2d (BNA) 1109, 1114 (Fed. Cir. 1999) ("When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same limitation.").

<sup>112</sup> *Epcon Gas Sys.*, 279 F.3d at 1030-31, 61 U.S.P.Q.2d (BNA) at 1476.

### 3. The Specification: Highly Relevant to Claim Construction

After considering the claim language itself, a court should also consider the specification.<sup>113</sup> The specification contains a written description of the invention, sometimes with drawings, and must enable a person of ordinary skill in the art to make and use the invention.<sup>114</sup> In claim construction analysis, the Federal Circuit believes the specification to be highly relevant, stating, "Usually it is dispositive; it is the single best guide to the meaning of a disputed term."<sup>115</sup>

If the claim language is clear on its face, the court should use the remaining intrinsic evidence only to determine if a narrowing from the clear language of the claims is required.<sup>116</sup> Such a deviation from the ordinary meaning only occurs when the patentee used "words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim

<sup>113</sup> *Markman I*, 52 F.3d at 979-80, 34 U.S.P.Q.2d (BNA) at 1329; *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1248-49, 48 U.S.P.Q.2d (BNA) 1117, 1120-21 (Fed. Cir. 1998) (explaining that limitations discussed in the specification or prosecution history should not be used to narrow the scope of the claim unless those limitations properly assist in defining a disputed claim term); *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582, 39 U.S.P.Q.2d (BNA) 1573, 1577 (Fed. Cir. 1996).

<sup>114</sup> 35 U.S.C. § 112, ¶ 1 (2000).

<sup>115</sup> *Vitronics*, 90 F.3d at 1582, 39 U.S.P.Q.2d (BNA) at 1577.

<sup>116</sup> *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1331, 59 U.S.P.Q.2d (BNA) 1401, 1407 (Fed. Cir. 2001).

scope."<sup>117</sup> Claim terms cannot "be narrowed by reference to the written description or prosecution history unless the language of the claims invites reference to those sources."<sup>118</sup> It is axiomatic that "[c]laims, not the specification embodiments, define the scope of protection."<sup>119</sup> Therefore, care must be taken that teachings are not imported into the claims unless it is clearly mandated.

#### a. Patentee Acting as a Lexicographer

Where the specification or prosecution history defines a term differently, the presumption in favor of the ordinary meaning may be overcome.<sup>120</sup> This recognition of the patentee as "his or her own

<sup>117</sup> *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327, 63 U.S.P.Q.2d (BNA) 1374, 1382 (Fed. Cir. 2002).

<sup>118</sup> *Johnson Worldwide Assoc. v. Zebco Corp.*, 175 F.3d 985, 989-90, 50 U.S.P.Q.2d (BNA) 1607, 1610 (Fed. Cir. 1999).

<sup>119</sup> *Am. Permahedge, Ins. v. Barcana, Inc.*, 105 F.3d 1441, 1444, 41 U.S.P.Q.2d (BNA) 1614, 1617 (Fed. Cir. 1997).

<sup>120</sup> *Johnson Worldwide*, 175 F.3d at 989, 50 U.S.P.Q.2d (BNA) at 1610; *Vitronics*, 90 F.3d at 1582, 39 U.S.P.Q.2d (BNA) at 1577; *Markman I*, 52 F.3d at 986, 34 U.S.P.Q.2d (BNA) at 1335; *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366, 62 U.S.P.Q.2d (BNA) 1658, 1662 (Fed. Cir. 2002); *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 U.S.P.Q.2d (BNA) 1851, 1854 (Fed. Cir. 2001); *Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1373, 59 U.S.P.Q.2d (BNA) 1609, 1614 (Fed. Cir. 2001); *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 621, 34 U.S.P.Q.2d 1816, 1821 (Fed. Cir. 1995) ("A claim must be read in view of the specification of which it is a part.").

lexicographer” holds even when the patentee defined the word more broadly than its ordinary meaning.<sup>121</sup>

If the patent specification defines a particular term, either expressly or by clear implication, it acts as a dictionary for interpreting that claim term.<sup>122</sup> This is true even if the definition the specification provides varies from the meaning that persons of skill in the art customarily ascribe to the term.<sup>123</sup> For this to occur, the patentee must clearly set forth any special definition in the specification or file history of the patent and typically cannot establish a definition that is the opposite of its ordinary meaning.<sup>124</sup>

*b. Ordinary Meaning Deprives the Claim of Clarity*

A claim term may also be narrowed by reference to the specification when the term chosen by the patentee so deprives the claim of clarity that there is no means to ascertain the scope of the claims from the language

<sup>121</sup> Jack Guttman, Inc. v. Kopyake Enter., Inc., 302 F.3d 1352, 1360, 64 U.S.P.Q.2d (BNA) 1302, 1307 (Fed. Cir. 2002).

<sup>122</sup> Jack Guttman, 302 F.3d at 1360, 64 U.S.P.Q.2d (BNA) at 1307; CCS Fitness, 288 F.3d at 1366, 62 U.S.P.Q.2d (BNA) at 1662; Johnson Worldwide, 175 F.3d at 990, 50 U.S.P.Q.2d (BNA) at 1610; Vitronics, 90 F.3d at 1582, 39 U.S.P.Q.2d (BNA) at 1577.

<sup>123</sup> Jack Guttman, 302 F.3d at 1360, 64 U.S.P.Q.2d (BNA) at 1307.

<sup>124</sup> Johnson Worldwide, 175 F.3d at 991, 50 U.S.P.Q.2d (BNA) at 1611; Renishaw PLC v. Marposs Societa' Per Azioni, 158 F.3d 1243, 1249, 48 U.S.P.Q.2d (BNA) 1117, 1121 (Fed. Cir. 1998) (“The patentee’s lexicography must, of course, appear ‘with reasonable clarity, deliberateness, and precision’ before it can affect the claim.”) (quoting *In re Paulsen*, 30 F.3d 1475, 1480, 31 U.S.P.Q.2d (BNA) 1671, 1674 (Fed. Cir. 1994)).

used.<sup>125</sup> If this is the case, the specification should be used as additional context from which the meaning of the claim term may be established.<sup>126</sup>

*c. Clear Disavowal of Subject Matter*

A claim term also may be limited by the specification when the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention.<sup>127</sup> For example, in *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, the court limited the disputed claim term based in part on statements in the specification indicating that “all embodiments” of the claimed invention used a particular structure.<sup>128</sup>

<sup>125</sup> CCS Fitness, 288 F.3d at 1367, 62 U.S.P.Q.2d (BNA) at 1663; Johnson Worldwide, 175 F.3d at 990, 50 U.S.P.Q.2d (BNA) at 1610.

<sup>126</sup> See, e.g., *Renishaw*, 158 F.3d at 1251-52, 48 U.S.P.Q.2d (BNA) at 1123.

<sup>127</sup> CCS Fitness, 288 F.3d at 1366-67, 62 U.S.P.Q.2d (BNA) at 1662.

<sup>128</sup> 242 F.3d 1337, 1343-44, 58 U.S.P.Q.2d (BNA) 1059, 1065 (Fed. Cir. 2001); see also *Toro Co. v. White Consol. Indus.*, 199 F.3d 1295, 1301, 53 U.S.P.Q.2d (BNA) 1065, 1069 (Fed. Cir. 1999) (limiting claim term based in part on statements in the specification describing a particular structure as “important to the invention”).

“prepositioning” in a claim was not limited to *automatic* prepositioning, even though the specification repeatedly referred to automatic prepositioning and never referred to *manual* prepositioning.<sup>134</sup>

It is often difficult to draw a line between construing a claim in light of the specification and improperly reading a limitation from a preferred embodiment or example into a claim.<sup>135</sup> In *Fromson v. Anitec Printing Plates, Inc.*, the dispute concerned the meaning of the phrase “anodized oxide coating” in a process claim directed to the continuous anodization of aluminum.<sup>136</sup> Fromson argued that the term should be construed in accordance with its plain meaning, which it argued was an oxide coating formed by anodization.<sup>137</sup> However, Anitec argued that the claim was limited to the porous form of the oxide coating disclosed in Fromson’s specification.<sup>138</sup> Although the specification did not explicitly state that “anodized” required a porous oxide coating, the court rejected Fromson’s

<sup>134</sup> 752 F.2d 1538, 1552, 224 U.S.P.Q. (BNA) 526, 534 (Fed. Cir. 1985).

<sup>135</sup> Bell Atlantic Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1270, 59 U.S.P.Q.2d (BNA) 1865, 1872 (Fed. Cir. 2001); Conark Comm., Inc. v. Harris Corp., 156 F.3d 1182, 1186-87, 48 U.S.P.Q.2d (BNA) 1001, 1005 (Fed. Cir. 1998) (“[W]hile . . . claims are to be interpreted in light of the specification and with a view to ascertaining the invention, it does not follow that limitations from the specification may be read into the claims.” (quoting *Sjolund v. Musland*, 847 F.2d 1573, 1581, 6 U.S.P.Q.2d (BNA) 2020, 2027 (Fed. Cir. 1988)).

<sup>136</sup> 132 F.3d 1437, 1440-42, 45 U.S.P.Q.2d (BNA) 1269, 1271-72 (Fed. Cir. 1997).

<sup>137</sup> *Id.* at 1443-44, 45 U.S.P.Q.2d (BNA) at 1273.

<sup>138</sup> *Id.* at 1443, 45 U.S.P.Q.2d (BNA) at 1273.

d. *Other Limitations Found in the Specification Should Not Be Read into the Claims*

If the specification does not define or require a limiting construction of the claim term, it cannot limit the patentee’s right.<sup>129</sup> A statement in the specification or prosecution history only narrows a claim beyond its literal scope when the patentee makes that intention clear with unambiguous and specific statements.<sup>130</sup> “[A]dding limitations to claims not required by the claim terms themselves, or unambiguously required by the specification or prosecution history, is impermissible.”<sup>131</sup>

Although the “[c]laims must be read in view of the specification,”<sup>132</sup> the claims are not limited to preferred embodiments or illustrative examples of an invention discussed in the written description.<sup>133</sup> For instance, in *Lemelson v. United States*, the Federal Circuit held that the term

<sup>129</sup> *Markman I*, 52 F.3d at 980, 34 U.S.P.Q.2d (BNA) at 1330.

<sup>130</sup> *Johnson Worldwide*, 175 F.3d at 989-90, 50 U.S.P.Q.2d (BNA) at 1610; *see also* *Dayco Prods., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1325, 59 U.S.P.Q.2d (BNA) 1489, 1497 (Fed. Cir. 2001).

<sup>131</sup> *Dayco Prods.*, 258 F.3d at 1327, 59 U.S.P.Q.2d (BNA) at 1496; *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347, 49 U.S.P.Q.2d (BNA) 1199, 1203 (Fed. Cir. 1998) (“[A] court may not import limitations from the written description into the claims.”); *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121, 227 U.S.P.Q. (BNA) 577, 585 (Fed. Cir. 1985) (en banc).

<sup>132</sup> *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582, 39 U.S.P.Q.2d (BNA) 1573, 1577 (Fed. Cir. 1996) (quoting *Markman I*, 52 F.3d at 979, 34 U.S.P.Q. at 1329).

<sup>133</sup> *Kraft Foods, Inc. v. Int’l Trading Co.*, 203 F.3d 1362, 1366, 53 U.S.P.Q.2d (BNA) 1814, 1817 (Fed. Cir. 2000); *Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc.*, 152 F.3d 1368, 1375, 47 U.S.P.Q.2d (BNA) 1738 (Fed. Cir. 1998).

invention.<sup>144</sup> It also follows the Federal Circuit's admonition that "claims are directed to the invention that is described in the specification; they do not have meaning removed from the 'context from which they arose.'" <sup>145</sup>

#### 4. The Prosecution History: Treated Like the Specification

The third source of intrinsic evidence for claim construction is the prosecution history of the patent, sometimes called the patent's "file wrapper" or "file history." It is treated similarly to the specification if the prosecution history is in evidence.<sup>146</sup> Statements the patentee makes during the prosecution of a patent "regarding the meaning of a claim term are relevant to the interpretation of that term in every claim of the patent absent a clear indication to the contrary."<sup>147</sup> Whether a court will define a term based on statements made during the prosecution depends on "whether a

<sup>144</sup> 35 U.S.C. § 112 (2000); *Johns Hopkins*, 152 F.3d at 1355, 47 U.S.P.Q.2d (BNA) at 1714.

<sup>145</sup> *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1369, 59 U.S.P.Q.2d (BNA) 1745, 1748 (Fed. Cir. 2001) (citing *Network, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352, 58 U.S.P.Q.2d (BNA) 1076, 1079 (Fed. Cir. 2001)).

<sup>146</sup> *Markman I*, 52 F.3d 967, 980, 34 U.S.P.Q.2d (BNA) 1321, 1330 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996); see *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1578, 34 U.S.P.Q.2d (BNA) 1673, 1678 (Fed. Cir. 1995) ("The terms of a claim, however, are not given their ordinary meaning to one of skill in the art when it appears from the patent and file history that the terms were used differently by the applicant.").

<sup>147</sup> *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1155, 42 U.S.P.Q.2d (BNA) 1577, 1583 (Fed. Cir. 1997) (citations omitted); see *Southwall*, 54 F.3d at 1578, 34 U.S.P.Q.2d (BNA) at 1678 ("A patentee may not proffer an interpretation for the purposes of litigation that would alter the indisputable public record consisting of the claim, the specification, and the prosecution history, and treat the claims as a 'nose of wax.'").

definition and limited the claims to porous oxide coatings.<sup>139</sup> In reaching this conclusion, the court relied on the purpose of the coating to protect the aluminum from burning and current surging as set forth in the specification.<sup>140</sup> According to the court, Anitec's non-porous oxide did not perform this function and, therefore, did not constitute an "anodized oxide coating."<sup>141</sup>

#### e. Claims Should Be Construed so as to Read upon the Preferred Embodiments

A claim construction that excludes a preferred embodiment discussed in the specification is "rarely, if ever, correct."<sup>142</sup> To be correct, such an interpretation "would require highly persuasive evidentiary support."<sup>143</sup> This support could be an extensive prosecution history where the patentee gave up or disclaimed a preferred embodiment to obtain allowance of narrower claims. This rule derives, in part, from the statutory requirement that the specification contain a written description of the

<sup>139</sup> *Id.* at 1445, 45 U.S.P.Q.2d (BNA) at 1274.

<sup>140</sup> *Id.* at 1443, 1445, 45 U.S.P.Q.2d (BNA) at 1272-74.

<sup>141</sup> *Id.* at 1445, 45 U.S.P.Q.2d (BNA) at 1274.

<sup>142</sup> *Dow Chem. Co. v. Sumitomo Chem. Co., Ltd.*, 257 F.3d 1364, 1378, 59 U.S.P.Q.2d (BNA) 1609, 1618 (Fed. Cir. 2001) (citations omitted); *Johns Hopkins Univ. v. CellPro, Inc.*, 152 F.3d 1342, 1355, 47 U.S.P.Q.2d (BNA) 1705, 1714 (Fed. Cir. 1998) ("A patent claim should be construed to encompass at least one disclosed embodiment in the written description portion of the patent specification."); *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1581, 38 U.S.P.Q.2d (BNA) 1126, 1130 (Fed. Cir. 1996).

<sup>143</sup> *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1583, 39 U.S.P.Q.2d (BNA) 1573, 1578 (Fed. Cir. 1996).

competitor would reasonably believe that the [patentee] had surrendered the relevant subject matter.”<sup>148</sup> Although the prosecution history should be used to understand the claim language, it, like the written description, cannot “enlarge, diminish, or vary” the limitations in the claims” absent statements expressly defining or limiting the scope of the claims.<sup>149</sup>

The prosecution history includes all documents pertaining to the original prosecution of the one or more applications which led to the patent in issue, as well as the post-issuance filings, including any certificates of correction, reexamination, or reissue of the patent.<sup>150</sup> These documents constitute a record of all communications between the applicant and the PTO concerning the patent application (“patent prosecution”).

Statements made by the applicant during prosecution regarding what a claim does *not* cover offer great assistance to the court in determining the proper meaning of a claim term.<sup>151</sup> Applicants often make such limiting statements in order to overcome prior art that the PTO believes may

<sup>148</sup> *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457, 46 U.S.P.Q.2d (BNA) 1169, 1175 (Fed. Cir. 1998).

<sup>149</sup> *Markman I*, 52 F.3d at 980, 34 U.S.P.Q.2d (BNA) at 1330 (citation omitted).

<sup>150</sup> See 35 U.S.C. §§ 301-307 (2000). Both reexamination and reissue allow the PTO to consider the patentability of an already issued patent. During reexamination, the PTO reconsiders the validity of one or more claims of an issued patent in view of documentary prior art. *Id.* Reissue is a procedure in which a patentee who has claimed more or less than he had a right to claim surrenders his patent and attempts to have it reissued with amended claims. 35 U.S.C. § 251 (2000). The prosecution history of a reexamination or reissue proceeding is, like the original prosecution history of a patent, a public record.

<sup>151</sup> *Southwall*, 54 F.3d at 1576, 34 U.S.P.Q.2d (BNA) at 1676-77.

invalidate the claim.<sup>152</sup> When applicants make such statements, courts will limit the scope of the claims to exclude material the applicant explicitly disclaimed.<sup>153</sup> Such a limiting construction may be appropriate even if the applicant’s statements were made with respect to a claim other than the claim in suit, depending on the context.<sup>154</sup>

### B. *Extrinsic Evidence: Not All Are Treated Alike*

In addition to intrinsic evidence, courts may rely on evidence extrinsic to the patent and prosecution history in construing the claims.<sup>155</sup> Such extrinsic evidence consists primarily of expert testimony, inventor testimony, and articles.<sup>156</sup> Not all extrinsic evidence is treated alike, however. For example, dictionaries and treatises, formerly considered a

<sup>152</sup> See *id.*

<sup>153</sup> *Id.* (“Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.”). This is similar to the doctrine of “prosecution history estoppel,” which the court applies when analyzing infringement under the doctrine of equivalents. Under that doctrine, limiting statements made during the prosecution of the patent may estop the patentee from obtaining a range of equivalents including disclaimed material. See *id.* at 1578, 34 U.S.P.Q.2d (BNA) at 1679.

<sup>154</sup> *Elkay Mfg. Comp. v. Ebco Mfg. Co.*, 192 F.3d 973, 980, 52 U.S.P.Q.2d (BNA) 1109, 1114 (Fed. Cir. 1999) (“When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same limitation.”).

<sup>155</sup> *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1373, 59 U.S.P.Q.2d (BNA) 1609, 1615 (Fed. Cir. 2001).

<sup>156</sup> *Id.*